DWR
CCTAG
Scenarios Subgroup Meeting

May 16, 2014

California Department of Water Resources
Climate Change Technical Advisory Subgroup Meeting

May 16, 2014
10:00 am-12:00 pm
DWR Fishbowl Conf Room, 2nd floor, Bonderson

https://resources.webex.com/resources/j.php?ED=229264172&UID=491358787&RT=MiM0

Provide your phone number when you join the meeting to receive a call back. Alternatively, you can call:
Call-in toll-free number (Verizon): 1-877-923-1522 (US)
Host access code: 679 474 0
Attendee access code: 295 056 7

AGENDA:

Update on Model Screening/Culling
Cayan

Recommendations paper and outline
Lynn

General Guidance for use on Specific Projects: Characterization of Scenarios
Schwarz

Discussion: Stress test scenarios continued
Schwarz

Draft Outline

Recommendations for the use of Climate Change Modeling in California Water Planning

I. Background, Purpose, and Need

- **a) Past activities and modeling approaches**
- **b) DWR planning applications**
- **c) Other planning applications (IRWM, UWMP, AWMP, RFMP)**
- **d) Exclusion of flooding from this analysis**

II. Model Selection

- **a) General approach**
- **b) Global filter**
- **c) Regional filter**
- **d) Water Management filter/Water Management metrics**
- **e) Water management and operations modeling limitations**

III. Stress-test/Drought Scenario Development

- **a) Description of different potential drought conditions and the stresses they put on the system**
- **b) Potential uses of drought scenarios**
- **c) Analysis of climate scenarios to identify drought stresses**
- **d) Development of drought scenarios not found in the climate scenarios**

IV. Downscaling

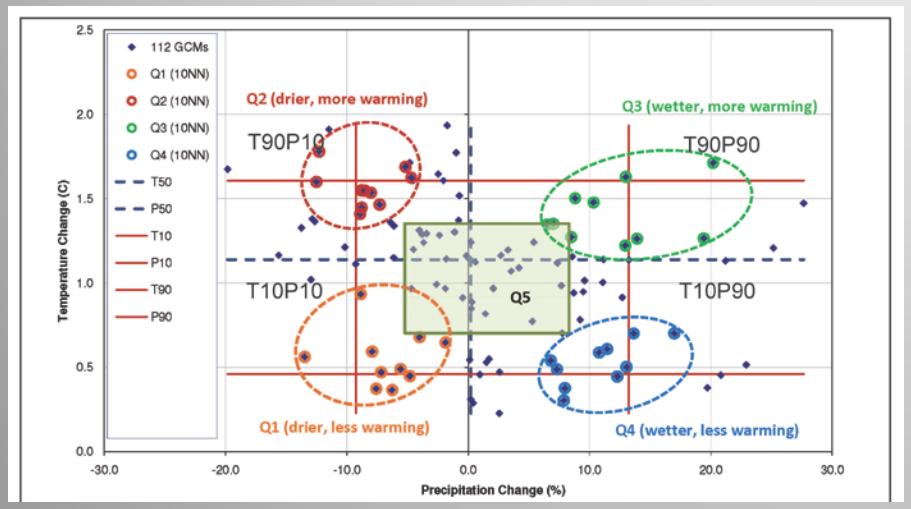
- **a) Previous approaches to downscaling**
- **b) Recommendations on future downscaling approaches**
  - **i) Statistical**
  - **ii) Dynamic**

V. Projection sampling and selection (for projects that cannot use entire suite)

- **a) Characterizing the projections**
- **b) Using an ensemble average**
- **c) Sampling from the ensemble**

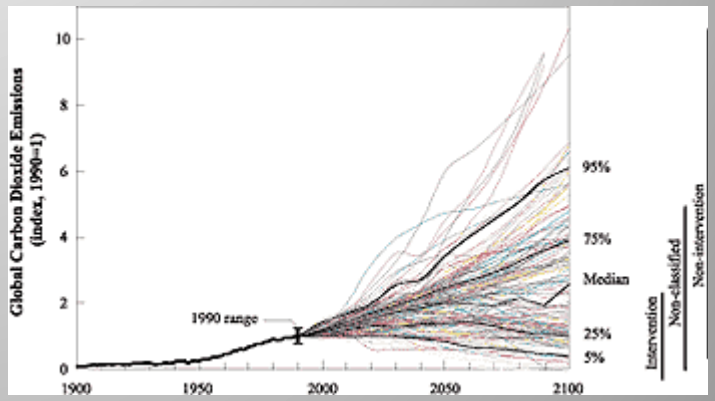
VI. Recommendations for future investigations and improvements

Characterizing or Classifying the Projections



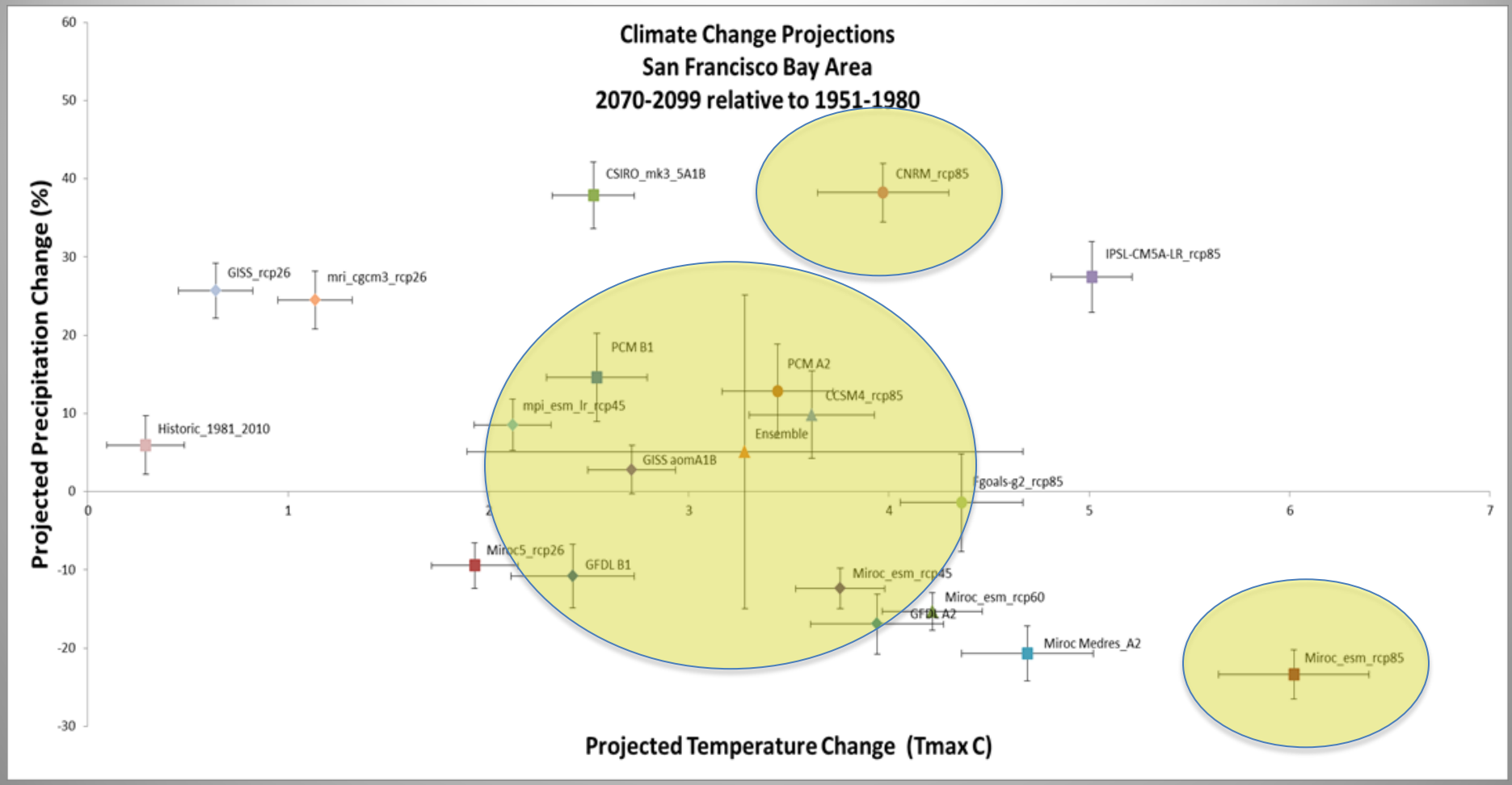
This is a hot and dry projection…

VS.



Each of these projections shows something a little different…

Characterization doesn't necessarily have to be hot/warm, wet/dry but some way of batching, characterizing, or grouping them would be helpful.



Other Characterizations?

- Variance and Variability?
- Seasonal shifts?

STRESS TEST SCENARIOS

Drought

Duration	**Severity**	**Extent**	**Recurance**
1-3 years	Paleo/extreme	Statewide	3-7 years
3-7 years	Paleo-Historic	Statewide- Westwide	5-10 years
10-20 years	Paleo-Historic	Statewide- Westwide	50 years
Paleo drought	Paleo	Westwide	-
Variability of precipitation beyond historical levels (inter and intra annual)			

- How will we define these drought periods?
  - Annual precipitation X% below historical average?
  - X number of months/year X% below average?

- How would we construct synthetic drought scenarios?
- Use historical precipitation as base?
- Use a climate projection?
- What does temperature do during these synthetic drought scenarios?

THANK YOU!

Next Subgroup TBD